

Occupancy GUI upgrade and related trouble

Some occupancy GUI detail windows were empty

→ investigations (M. Weber, KH) showed:

- the occupancy GUI mapping between HDI names and VRB channels was completely out of date
- SMTExamine also out of date — worrying!
(also used for offline reconstruction)
- online database partially out of date (VRB 6115)
- a few more strange things and bugs
in the occupancy GUI code

→ I tried to resolve things quickly

SMT Occupancy MONITOR

Display Quit

Occupancy

	0	1	2	3	4	5	6	7		0	1	2	3	4	5	6	7		0	1	2	3	4	5	6	7		0	1	2	3	4	5	6	7																		
09	17.7	0	5.8	12.9	21.8	15.0			09	11.4	10.7	4.8	7.0	11.7	8.6			09	8.4	13.7	6.9	16.6	7.7	14.5			09	4.7	0	7.3	8.3	0	5.1			09	0.8	7.4	9.6	13.5	6.6	12.2			09	4.1	4.5	5.4	5.0	11.0	22.7		
10	2.5	2.5	4.0	3.6	0	3.9			10	3.3	3.1	2.2	1.2	0	7.1			10	3.0	3.0	3.2	4.9	3.4	4.6			10	4.2	3.9	3.9	3.0	6.0	3.7			10	7.4	5.4	4.0	3.7	5.2	5.7			10	0	4.3	6.0	4.4	5.4	0		
11	3.1	3.4	6.8	3.3	7.1	6.2	0	3.5	11	5.7	0	4.9	2.7	5.4	0	4.0	4.7	11	4.4	3.3	5.7	3.9	6.8	5.7	8.1	5.9	11	0	0	0	3.3	3.0	0	3.4	0	11	0	5.7	4.0	0	4.3	4.2	5.7	6.5	11	4.2	4.4	6.1	5.5	3.9	4.3	6.2	5.1
12	3.1	2.6	1.8	0	0	3.9	2.8	2.5	12	2.8	1.9	2.5	2.0	2.5	2.0	2.6	2.1	12	2.6	2.8	2.3	3.3	2.5	2.4	2.3	2.1	12	0	2.2	1.7	2.2	1.9	2.5	0	2.0	12	3.0	3.5	3.5	2.6	2.3	2.3	1.8	2.5	12	3.6	2.2	3.4	1.8	2.6	4.0	3.2	0
13	0	2.9	6.0	5.1	3.9	4.7	3.6	2.1	13	3.5	3.0	2.9	3.2	2.7	2.0	2.3	2.6	13	3.2	3.3	4.6	5.3	0	6.0	3.3	4.8	13	3.1	3.4	2.4	3.0	5.2	4.4	0	13	6.7	5.8	3.4	4.4	4.0	0	4.1	3.7	13	5.9	5.6	0	6.9	4.5	6.3	4.6		
16	2.7	3.0	2.3	2.6	1.9	2.4	2.0	2.0	15	2.2	5.2	3.1	2.2	2.1	2.5	1.4	0.8	15	4.4	9.8	5.2	2.4	2.4	3.4	1.8	1.7	15	2.9	2.5	2.3	2.9	0	0	0	0	15	4.7	4.9	2.9	4.9	2.6	14.3	4.0	2.9	15	4.3	3.1	3.6	5.4	4.1	4.9	2.8	2.0
17	0	2.9	0	2.0	2.7	2.9	2.5	3.1	16	0	6.2	5.9	14.1	1.6	2.2	0	4.8	16	6.2	3.8	6.4	5.6	7.4	2.5	1.6	1.5	16	2.4	7.8	2.2	9.9	0	0	1.7	1.4	16	3.7	6.9	6.7	5.4	2.4	2.2	16.5	6.7	16	0	4.3	7.6	2.5	5.4	0.8	2.1	1.9
18	3.8	3.5	4.1	3.1	3.0	2.6	0	1.6	17	6.6	0	4.1	6.1	3.0	7.2	2.2	6.1	17	2.7	2.5	2.9	1.7	2.0	2.1	1.4	2.7	17	2.4	2.7	2.5	2.5	1.8	0	0	1.4	17	4.1	0	4.8	4.6	4.6	0	7.4	2.6	17	3.1	2.8	3.4	0	3.1	2.1	1.6	2.5
19	6.2	2.2	8.0	9.7	5.1	1.6	6.1	8.7	18	3.7	8.9	5.4	3.6	3.5	6.8	x	x	18	4.9	0	5.7	0	0	3.1	0	0	18	6.4	3.4	22.5	12.4	0	0	0	0	18	3.2	11.6	2.6	2.6	0	3.0	5.7	10.2	18	3.7	10.0	11.8	20.3	6.8	5.7	8.8	5.3
20	4.9	7.9	10.2	8.2	17.3	6.6	6.5	3.8	19	0	19.7	14.0	5.9	5.4	5.8	1.9	x	19	0	6.4	0	6.6	7.9	0.8	0	x	19	5.2	0	2.7	0	6.8	0	8.2	5.8	19	0	0	2.1	5.0	4.5	4.2	7.0	0	19	4.8	4.9	4.8	5.8	9.4	4.8	3.5	0

Rate 0x61 Rate 0x63 Rate 0x65 Rate 0x67 Rate 0x69 Rate 0x6b

old

SMT Occupancy MONITOR

Display Layout Quit

Average occupancy

	A	B	C	D	E	F	G	H		A	B	C	D	E	F	G	H		A	B	C	D	E	F	G	H		A	B	C	D	E	F	G	H		A	B	C	D	E	F	G	H											
09	17.7	x	5.8	12.9	21.8	15.0			09	11.4	10.7	4.8	7.0	11.7	8.6			09	8.4	13.7	6.9	16.6	7.7	14.5			09	4.7	x	7.3	8.3	x	5.1			09	0.8	7.4	9.6	13.5	6.6	12.2			09	4.1	4.5	5.4	5.0	11.0	22.7				
10	2.8	3.2	5.2	3.8	x	4.2			10	3.0	2.8	2.9	2.3	x	11.9			10	3.4	3.0	4.6	4.3	5.0	5.4			10	3.2	4.4	4.3	3.3	7.0	5.9			10	6.6	5.4	3.7	4.9	6.6	6.7			10	x	3.7	5.1	4.2	6.6	x				
11	4.6	3.8	5.2	3.9	5.9	6.0	x	3.6	11	4.9	x	7.1	2.7	5.8	x	4.9	4.9	11	7.6	3.7	4.2	4.6	5.5	5.5	6.1	4.8	11	x	x	x	5.6	x	x	3.8	x	11	x	5.5	4.3	x	5.1	4.8	7.6	7.2	11	4.1	3.7	6.1	5.7	4.7	5.6	5.7			
12	3.3	3.0	1.8	x	x	3.5	2.6	2.5	12	2.9	2.4	2.4	2.4	3.0	2.1	2.8	2.2	12	3.0	3.4	2.4	2.9	2.7	3.0	2.5	2.1	12	2.8	2.9	2.9	2.6	3.1	3.5	2.7	0	12	2.3	3.3	2.0	3.2	3.2	3.2	1.5	2.7	12	2.8	3.3	2.4	2.4	0	2.0	1.9	3.1		
13	x	3.9	5.8	5.2	5.0	5.7	4.2	4.1	13	4.8	2.9	3.3	3.8	4.0	3.1	3.4	3.0	13	5.2	6.5	5.5	5.7	x	6.9	4.6	7.1	13	4.7	4.7	5.4	5.7	3.9	3.7	5.5	x	13	5.7	6.1	4.2	5.6	5.8	3.8	x	13	4.7	3.8	x	5.5	5.8	5.9	5.6	4.0			
16	2.7	3.0	2.3	2.6	1.9	2.4	2.0	2.0	15	2.2	5.2	3.1	2.2	2.1	2.5	1.4	8.8	15	4.4	9.8	5.2	2.4	2.4	3.4	1.8	1.7	15	2.9	2.5	2.3	2.9	x	x	x	x	15	4.7	4.9	2.9	4.9	2.6	14.3	4.0	2.9	15	4.3	3.1	3.6	5.4	4.1	4.9	2.8	2.0		
17	x	2.9	x	2.0	2.7	2.9	2.5	3.1	16	x	6.2	5.9	14.1	1.6	2.2	x	4.8	16	6.2	3.8	6.4	5.6	7.4	2.5	1.6	1.5	16	2.4	7.8	2.2	9.9	x	1.7	1.4	16	3.7	6.9	6.7	5.5	2.4	2.2	16.5	6.7	16	x	4.3	7.6	2.5	5.4	0.8	2.1	1.9			
18	3.8	3.5	4.1	3.1	3.0	2.6	x	1.6	17	6.6	x	4.1	6.1	3.0	7.2	2.2	6.1	17	2.7	2.5	2.9	1.7	2.0	2.1	1.4	2.7	17	2.4	2.7	2.5	2.5	1.8	x	x	1.4	17	4.1	x	4.8	4.6	4.6	x	7.4	2.6	17	3.1	2.8	3.4	x	3.1	2.1	1.6	2.5		
19	6.2	2.2	8.0	9.7	5.1	1.6	6.1	8.7	18	3.7	8.9	5.4	3.6	3.5	6.8	x	x	18	4.9	x	5.7	x	x	3.1	x	x	18	6.4	3.4	22.5	12.4	x	x	x	x	18	3.2	11.6	2.6	2.6	x	3.0	5.7	10.2	18	3.7	10.0	11.8	x	6.8	5.7	8.8	5.3		
20	4.9	7.9	10.2	8.2	17.3	6.6	6.5	3.8	19	x	19.7	14.0	5.9	5.4	5.8	1.9	x	19	x	6.4	x	6.6	7.9	0.8	x	x	19	5.2	x	2.7	x	6.8	x	8.2	5.8	19	x	x	x	x	2.1	5.0	4.5	4.2	7.0	x	19	4.6	4.9	4.8	5.8	9.4	4.8	3.5	x

Rate 0x61 Rate 0x63 Rate 0x65 Rate 0x67 Rate 0x69 Rate 0x6b

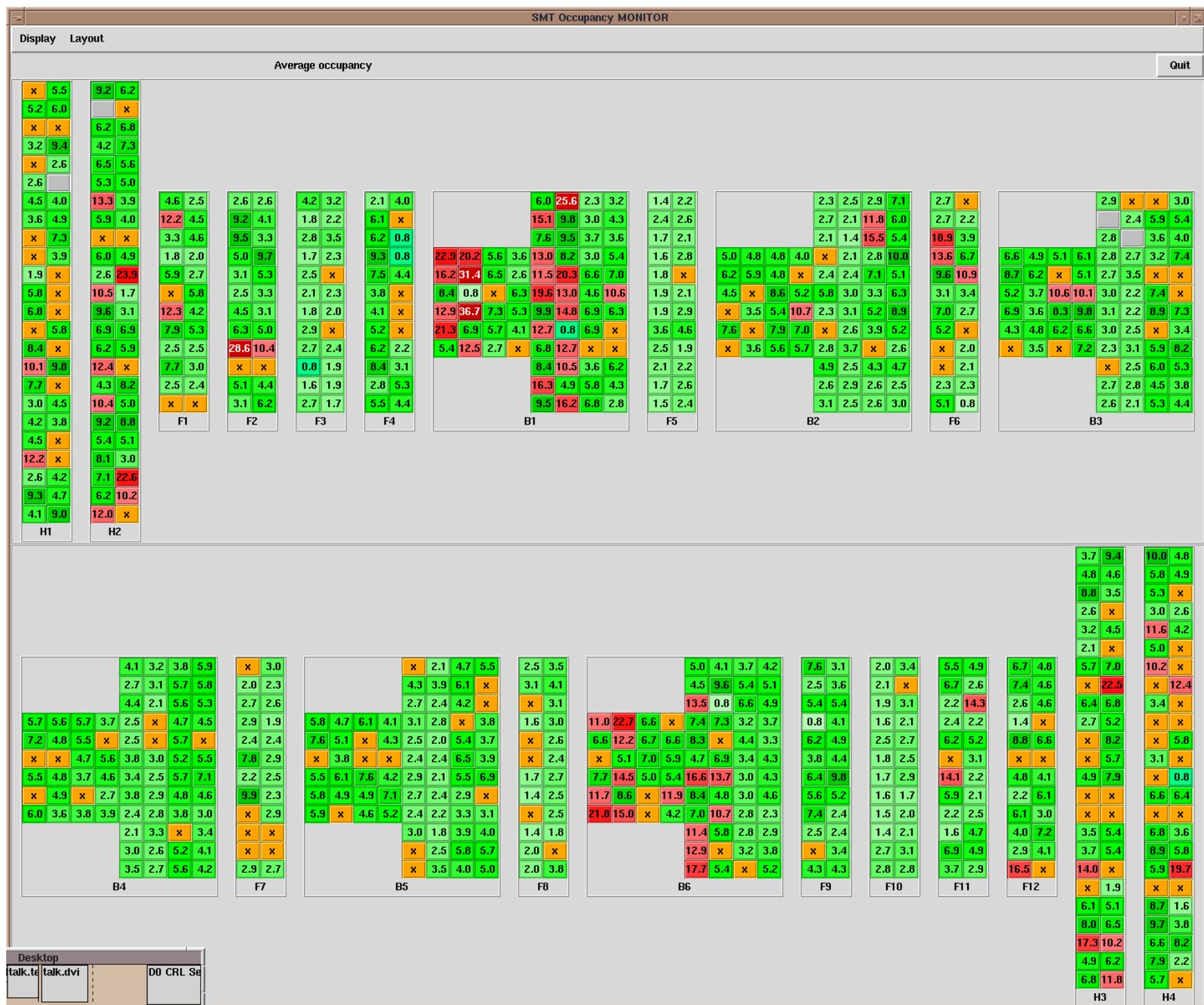
new

old



new





Bug fixes

- detector-based view works
- menus have proper default settings
- double-sided HDIs treated correctly
- lock file for reliable communication with SMTExamine
- disabled HDIs will show up as disabled w/o restart

New features

- automatic update of mapping from online database
- fallback to local copy of database possible
- greatly reduced dependence on detector parameters
- naming scheme simplified
- color schemes unified
- documentation (and much simpler code)

New code is 22% shorter despite new features